

REMARKS

Reconsideration and allowance are respectfully requested in light of the preceding amendments and following remarks. No claims having been cancelled and claims 9-11 having been added by this response, the Applicants respectfully submit that 11 claims, specifically claims 1-11, remain pending and properly under consideration in this application. Of these 11 claims, claims 1, 5 and 7 are the independent claims.

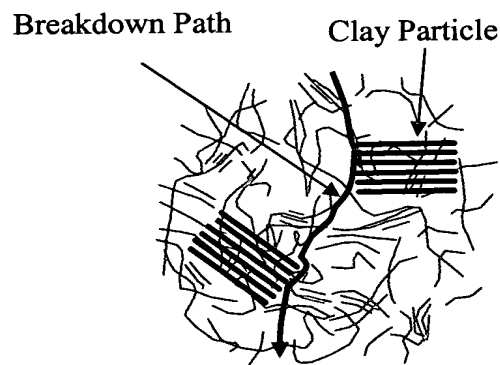
Rejections under 35 U.S.C. § 103

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Pat. No. 4,692,490 to Abolins ("Abolins") in view of U.S. Pat. Nos. 5,707,439 or 5,530,052 to Takekoshi et al. (collectively "Takekoshi") and, in the alternative, as unpatentable over Kosaka et al.'s U.S. Pat. No. 4,483,958 ("Kosaka") or Chao et al.'s U.S. Pat. No. 5,952,417 ("Chao") in view of Takekoshi and further in view of Abolins or Mizutani et al.'s U.S. Pat. Appl. No. US 2001/0014389 ("Mizutani").. The Applicants respectfully maintain their traversal of these rejections for the reasons detailed in their previous responses and incorporate, by reference, the arguments presented and the discussion of the applied references in this response.

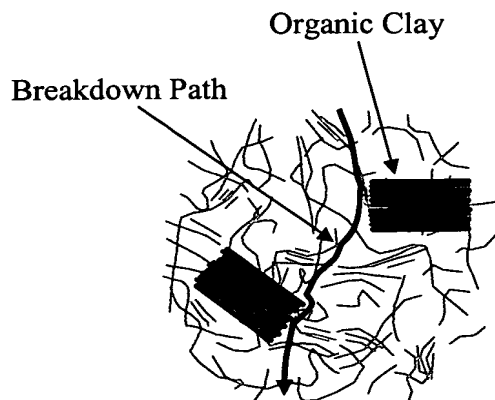
The Applicants also respectfully contend that the present invention, as reflected in the amendments above to claims 1 and 5, provides that the organic clay is generally dispersed within the polymer composition as mono-layer particles of organic clay. Support for this claim limitation is found in the specification at page 6, lines 13-24. The Applicants respectfully submit that the improved breakdown resistance exhibited by compositions and articles according to the present invention results at least in part from

this alteration of the basic inorganic clay structure to produce organic clay particles having a substantially mono-layer structure.

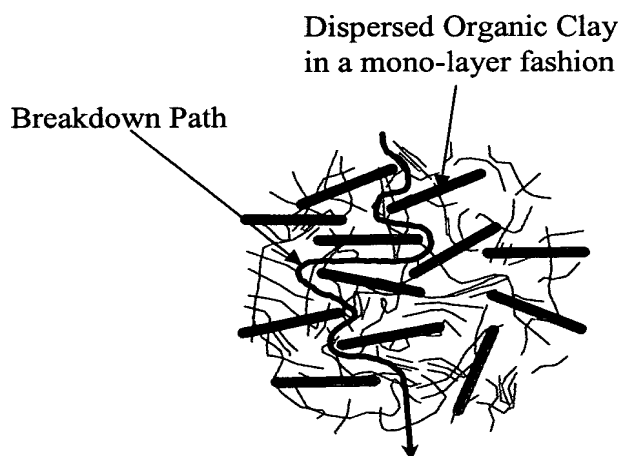
The Applicants respectfully contend that unseparated inorganic clays such as those taught in Abolins would be dispersed within a polymer as multi-layer particles as illustrated here:



The Applicants further respectfully contend that treating such clay particles in a manner that renders them organic but does not result in the separation of the individual layers of the clay particles does not significantly alter the breakdown path and thus does not result in substantial improvement in the breakdown resistance of the resulting article as illustrated here:



The Applicants respectfully submit, however, that treating the inorganic clay particles in the claimed manner to separate the individual layers and to coat the surface with one or more organic species, the resulting composition exhibits substantial breakdown voltage improvements at similar clay loading levels.



The Applicants respectfully submit that this structural difference is reflected in TEM micrographs presented below that were prepared from identical polymer

compositions having the same 5% loading of either standard multi-layer or mono-layer clay particles.

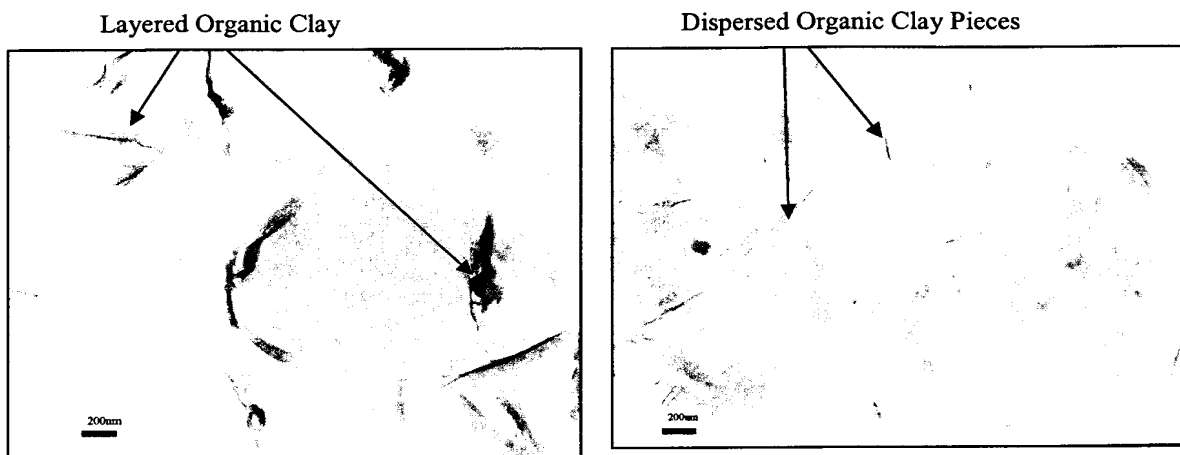


Photo 1. Polymer with 5% Clay

Clay in multi-layer particles

Photo 2. Polymer with 5% Clay

Clay treated to form mono-layer particles

The Applicants respectfully maintain that this alteration of the basic structure of inorganic clay as taught in Abolins is neither taught nor suggested by the prior art references of record. The Applicants, therefore, respectfully renew their request that this rejection be withdrawn.

CONCLUSION


All rejections having been addressed and overcome, the Applicants respectfully contend that the present application is now in condition for Allowance and a Notice to

that effect is earnestly solicited. Should the Examiner feel that further discussion on any point would be helpful in advancing the prosecution of this application, the Examiner is respectfully requested to contact the undersigned.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY & PIERCE, P.L.C.

By  ✓
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